

CLAIMS:

1. An electroluminescent display comprising at least one display pixel (P), said display pixel (P) comprising at least:

- a substrate (1);
- a first electrode (2) deposited on or across said substrate (1);
- 5 - an electroluminescent layer (4), and
- a second electrode (5),

characterized in that said display pixel (P) further comprises at least one insulating structure (3') within said display pixel (P) adapted to enhance the light output from said display pixel (P).

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2. An electroluminescent display as claimed in claim 1, wherein said insulating structure (3') is part of a dielectric insulating layer (3) deposited on or across the first electrode (2).

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3. An electroluminescent display as claimed in claim 1, wherein said insulating structure is part of said substrate (1) as a top substrate layer (1'').

4. An electroluminescent display as claimed in claim 2 or 3, wherein said second electrode (5) comprises a reflective layer and said light output is enhanced by reflection at
20 said reflective layer.

5. An electroluminescent display as claimed in claim 1, wherein said display pixel (P) comprises at least one side light output enhancing structure (3'').

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6. An electroluminescent display as claimed in claim 5, wherein said side light output enhancing structure (3'') comprises walls (11,12) which are slanted to enhance the light output for light (9) generated in said electroluminescent layer of said display pixel (P) and to prevent output of light (9') received from other display pixels of said electroluminescent display.

7. An electroluminescent display as claimed in claim 1, wherein said substrate (1) is adapted by at least one top substrate layer so as to allow total internal reflection for some light output of said display pixel (P).

8. An electroluminescent display as claimed in claim 7, wherein said substrate is thin compared to a lateral dimension of said display pixel (P).

9. An electroluminescent display as claimed in claim 7, wherein said substrate comprises top substrate layers adapted to allow said total internal reflection.

10. An electroluminescent display as claimed in any one of the preceding claims, wherein, in operation, said insulating structure (3') and/or said side light output enhancing structure (3'') provide areas of different brightness levels B within said display pixel P.

11. An electroluminescent display as claimed in claim 10, wherein said areas are patterned to provide images (15,16,17,18,19) with different brightness levels B.

12. An electronic device comprising an electroluminescent display as claimed in any one of the preceding claims.

13. A method of manufacturing an electroluminescent display comprising at least one display pixel (P), the method at least comprising the steps of:

- providing a substrate (1)
 - depositing a first electrode layer (2) on or across said substrate (1);
 - depositing an electroluminescent layer (4) on or across said first electrode layer (2);
 - depositing a second electrode layer (5) on or across said electroluminescent layer (4),
- characterized in that said method further comprises a structuring step wherein at least one insulating structure (3'; 3''; 1'') is provided within said display pixel (P) adapted to enhance the light output from said display pixel (P).

14. A method as claimed in claim 13, wherein said structuring step is performed in an insulating layer (3) deposited in or across said first electrode (2).

15. A method as claimed in claim 13, wherein said structuring step is performed in said substrate (1).

16. A method as claimed in claim 13, wherein said substrate (1) comprises top
5 substrate layers and said electroluminescent layer (4) comprises emissive layers, the method comprising the step of tuning the thickness of the top substrate layers and emissive layers so as to control the effects that enhance the light output.